



US Army Corps
of Engineers®
Detroit District

TRAFFIC STATEMENT 2007 NAVIGATION SEASON St. Marys Falls Canal, Michigan



Photo of the M/V Adam E. Cornelius Downbound in the Lower Harbor

Prepared by
U.S. Army Corps of Engineers
Detroit District
Sault Ste. Marie Area Office

TRAFFIC STATEMENT

St. Marys Falls Canal, Michigan

The 2007 commercial navigation season through the United States locks began on 25 March 2007 and ended 297 days later on 15 January 2008. On 13 March 2007, USCGC BISCAYNE BAY and MACKINAW passed through the MacArthur Lock for ice breaking operations. The first commercial vessel for the season was the M/V ROGER BLOUGH on 25 March 2007 down bound for Gary, IN. The last commercial vessel S/S MICHIPICOTEN passed down bound through the Poe Lock on 15 January 2008.

Delays are defined as elapsed time a vessel spends waiting to proceed with a lockage. Forty-four vessels were delayed by ice for a total of 17 hours 54 minutes. Lock and Hardware malfunctions accounted for no boats being delayed. Delays caused by interference by other vessels totaled 10 hours 52 minutes. Vessel equipment malfunction accounted for 48 minutes of delays. Maintenance of lock equipment accounted for 2 hours and 57 minutes of delays. Vessels detained by the U.S. Army Corps of Engineers or the USCG accounted for 59 minutes of delays. All other delays amounted to 14 hours 24 minutes. The St Marys River was reported being closed by the USCG Vessel Traffic Service for a total of 256 hours 53 minutes for weather related issues.

The largest cargo recorded for a single passage in the 2007 season was 65,386 net tons of coal by the M/V INDIANA HARBOR on 14 August 2007. The greatest total seasonal cargo transported by a single vessel was 2,935,916 net tons carried by the M/V PAUL R. TREGURTHA. The smallest cargo for a single passage in 2007 was 7 net tons of residual fuel oil by the TUG ANGLIAN LADY and BARGE PML 2501 on 22 May 2007.

Cargo flow was the greatest in the month of May with 9,652,542 net tons passing through the locks. A total of 4,730 cargo carriers passed through the locks during the 2007 season, an increase of 318 from the 2006 season. An annual total of 81,683,184 net tons of freight were recorded. This was 636,349 net tons below the 2006 total. Total vessel passages increased from 8,096 in 2006 to 8,507 in 2007. Freight decreased by 0.78 percent and total passages increased by 5.08 percent.

Comparing the movement of cargo in and out of Lake Superior, 22 commodities experienced decreases from 2006 ranging from 6.24% for Asphalt, Tar & Pitch to 100% for Manganese Ore. Commodities increasing in volume ranged from Iron Ore at 1.82% to Electrical Machinery at 160.67%. The greatest single gain in cargo tonnage was 1,209,398 net tons of Wheat while the most significant decrease was 1,605,742 net tons of Coal.

Starting with the 2007 Navigation Season in a continuing effort to improve and standardize data collection procedures with the rest of the U.S Army Corps of Engineers passenger numbers were collected from all recreational vessels in addition to vessels carrying paying passengers.

Starting with the 2006 Navigation Season, all waterway traffic reporting is being input directly into a centralized database (OMNI - Operations and Maintenance of Navigation

Information) hosted by Rock Island District. This required a few changes in how waterway traffic information is recorded. The primary change is counting Integrated Tug Barge units as two bottoms instead of one as had previously been done.

The conversion to OMNI for data collection provides several new data viewing features including tow performance. Tow performance compares vessels to each other in terms of time from start of lockage to end of lockage. The Standard deviation of the times for a particular vessel is used to provide insight into the consistency that an individual vessel maintains in lockage times between passages. Looking only at vessels, which have thirty or more lockages during the season, the following trends can be seen: One thousand foot length class vessels generally have the longest lockage time ranging from 6.30 minutes longer than average for the M/V AMERICAN INTEGRITY to 17.45 minutes longer than average for the M/V EDGAR B. SPEER. For vessels less than 1,000 feet in length, the times varied from 11 minutes faster than average for the M/V AMERICAN MARINER to 11.42 minutes longer than average for the M/V ROGER BLOUGH. The M/V JOHN G. MUNSON was the most consistent in terms of time with a standard deviation of 6.88. The least consistent vessel in terms of time was the M/V MESABI MINER with standard deviation of 24.1

Starting with the 2004 Navigation Season, Commodity codes were recorded using the more detailed standard codes of the U.S. Army Corps of Engineers Lock Performance Monitoring System. These codes do not match the previously used codes in all cases, with the primary result being the elimination of miscellaneous merchandise and some commodities being broken out into multiple commodities (for example, Fuel Oil is now broken down into Distillate and Residual Fuel Oil).

The periods of operation and total passages of all craft for each lock during the 2007 season are as follows:

Lock	Traffic Opening Day	Closing Day	Number of Days in operation	Total Passages
MacArthur	15 April 07	23 December 07	252	4,371
Poe	25 March 07	15 January 08	297	4,134
Davis *	N/A	N/A	1	2
Sabin **	N/A	N/A	0	0

* Used occasionally

** Decommissioned

The following tabulation shows the number of cargo vessel passages recorded for the past ten navigational seasons through the American canal:

Year	No. Passages	Year	No. Passages
1998	4,648	2003	4,205
1999	4,595	2004	4,189
2000	4,845	2005	4,312
2001	4,309	2006	4,412
2002	4,543	2007	4,730

The following is a comparative monthly statement of freight tonnage moved through the St. Marys Falls Canal for the past two seasons:

Month	2006 Net Tons	2007 Net Tons	Increase/Decrease
March	1,744,715	1,561,454	-183,261
April	8,329,419	8,124,259	-205,160
May	9,194,240	9,652,542	458,302
June	8,770,563	8,923,890	153,327
July	9,419,452	9,109,760	-309,692
August	9,185,863	9,295,147	109,284
September	8,748,749	8,577,608	-171,141
October	8,619,022	8,253,973	-365,049
November	7,921,331	7,508,968	-412,363
December	7,830,495	7,529,771	-300,724
January 2008	2,555,684	3,145,812	590,128
Total	82,319,533	81,683,184	-636,349

Statistical Report of Lake Commerce
 Passing Through the Canal at Sault Ste. Marie, Michigan
 For the Season of 2007

Item	Westbound	Eastbound	Total Net Tons	Previous 3 Seasons Average
Asphalt, Tar & Pitch	0	52,762	52,762	46,354
Barley & Rye	0	143,485	143,485	16,003
Cement & Concrete	405,184	0	405,184	496,433
Clay & Refrac. Mat.	0	162,247	162,247	174,628
Coal	2,095,903	17,712,036	19,807,939	20,558,211
Coal Coke	34,385	201,179	235,564	296,677
Corn	0	0	0	16,158
Distillate Fuel Oil	128,033	22,635	150,668	150,008
Dredged Material	0	52,072	52,072	12,453
Electrical Machinery	15,919	1,976	17,895	2,724
Flaxseed	0	552,681	552,681	451,322
Food Products NEC	0	0	0	7,559
Gasoline	71,636	19,546	91,182	92,001
Grain Mill Products	0	106,356	106,356	277,289
I&S Bars & Shapes	88,906	12,116	101,022	62,964
I&S Pipe & Tube	22,310	1,630	23,940	71,457
I&S Plates & Sheets	154,933	307,092	462,025	190,687
I&S Primary Forms	202	73	275	37,138
Iron & Steel Scrap	5,143	160,519	165,662	83,134
Iron Ore	26,697	43,752,680	43,779,377	43,693,410
Limestone	4,078,746	0	4,078,746	4,519,072
Lube Oil & Greases	0	0	0	1,213
Lumber	0	7,261	7,261	6,486
Machinery (Not Elec)	32,153	1,798	33,951	14,002
Manganese Ore	0	0	0	25,964
Multi-commodities in Containers	0	0	0	832
Oats	0	221,436	21,436	197,091
Oilseeds NEC	0	900,657	900,657	805,546
Paper & Paperboard	0	15,073	15,073	0
Petroleum Coke	0	32,161	32,161	606
Phosphatic Fert.	0	0	0	55,325
Pig Iron	8,581	0	8,581	0
Potassic Fert.	0	576,025	576,025	560,780
Primary I&S NEC	0	0	0	367
Pulp & Waste Paper	0	17,306	17,306	14,993
Residual Fuel Oil	19,163	0	19,163	16,817
Salt	476,477	0	476,477	645,939
Sand & Gravel	30,971	0	30,971	6,066
Slag	19,665	600,353	620,018	611,115
Sodium Hydroxide	17,978	0	17,978	18,517
Soybeans	6,366	103,176	109,542	218,724
Vegetable Oils	0	0	0	579
Vegetables & Prod.	0	373,096	373,096	697,442
Wheat	0	7,834,406	7,834,406	6,840,115
Wood Chips	0	0	0	2,495
Wood in the Rough	0	0	0	1,414
Vessel Passages*	4,566	3,941	8,507	7,877
Lockages	3,752	3,251	7,003	6,714
Total Passengers	63,081	29,567	92,648	92,447
Recreational Passengers	798	734	1,532	N/A
Freight (Net Tons)	7,739,351	73,943,833	81,683,184	81,988,112

Comparative Statistical Statement of Lake Commerce
Passing Through the Canal at Sault Ste. Marie, Michigan
For the Seasons of 2006 and 2007

Item	2006 Season	2007 Season	Increase/Decrease	Percent Increase Decrease
Vessel Passages	8,096	8,507	411	5.08%
Cargo Carriers	4,412	4,730	318	7.21%
Non-Cargo Carriers	3,684	3,777	93	2.52%
Lockages	6,687	7,003	316	4.73%
Total Passengers	91,347	92,648	1,301	1.42%
Recreational Passengers	N/A	1,532	N/A	N/A
Asphalt, Tar, & Pitch	56,272	52,762	-3,510	-6.24%
Barley & Rye	0	143,485	143,485	100.00%
Cement & Concrete	500,590	405,184	-95,406	-19.06%
Clay, Refrac. Mat.	195,809	162,247	-33,562	-17.14%
Coal	21,413,681	19,807,939	-1,605,742	-7.50%
Coal Coke	506,688	235,564	-271,124	-53.51%
Corn	15,903	0	-15,903	-100.00%
Distillate Fuel Oil	174,456	150,668	-23,788	-13.64%
Dredged Material	37,360	52,072	14,712	39.38%
Electrical Machinery	6,865	17,895	11,030	160.67%
Flaxseed	502,148	552,681	50,533	10.06%
Gasoline	77,538	91,182	13,644	17.60%
Grain Mill Products	237,675	106,356	-131,319	-55.25%
I&S Bars & Shapes	117,022	101,022	-16,000	-13.67%
I&S Pipe & Tube	74,657	23,940	-50,717	-67.93%
I&S Plates & Sheets	307,777	462,025	154,248	50.12%
I&S Primary Forms	18,485	275	-18,210	-98.51%
Iron & Steel Scrap	81,284	165,662	84,378	103.81%
Iron Ore	42,998,172	43,779,377	781,205	1.82%
Limestone	4,444,572	4,078,746	-365,826	-8.23%
Lumber	0	7,261	7,261	100.00%
Machinery (Not Elec)	16,155	33,951	17,796	110.16%
Manganese Ore	28,613	0	-28,613	-100.00%
Multi-Commodities in Containers	2,496	0	-2,496	-100.00%
Oats	259,351	221,436	-37,915	-14.62%
Oilseeds NEC	960,705	900,657	-60,048	-6.25%
Paper & Paperboard	0	15,073	15,073	100.00%
Petroleum Coke	0	32,161	32,161	100.00%
Pig Iron	0	8,851	8,851	100.00%
Potassic Fert.	511,143	567,025	55,882	10.93%
Primary I&S NEC	1,102	0	-1,102	-100.00%
Pulp & Waste Paper	0	17,306	17,306	100.00%
Residual Fuel Oil	15,481	19,163	3,682	23.78%
Salt	621,798	476,477	-145,321	-23.37%
Sand & Gravel	0	30,971	30,971	100.00%
Slag	680,637	620,018	-60,619	-8.91%
Sodium Hydroxide	14,437	17,978	3,541	24.53%
Soybeans	182,369	109,542	-72,827	-39.93%
Vegetable & Prod	631,284	373,096	-258,188	-40.90%
Wheat	6,625,008	7,834,406	1,209,398	18.26%
Wood in the Rough	2,000	0	-2,000	-100.00%
Total Freight	82,319,533	81,683,184	-645,079	-0.78%

The St. Marys Falls Canal was opened 25 March 2007 and closed 15 January 2008. (A season of 297 days)

Statistical Table of Freight Tonnage
Passing Through the Canal by Lock and Direction at Sault Ste. Marie, Michigan
for the Season of 2007

Month	MacArthur	Poe	Davis	West Bound	East Bound	Total
MARCH	34,416	1,527,038	0	34,416	1,527,038	1,561,454
APRIL	615,914	7,508,345	0	680,748	7,443,511	8,124,259
MAY	2,572,352	7,080,190	0	1,040,827	8,611,715	9,652,542
JUNE	2,182,070	6,741,820	0	1,041,508	7,882,382	8,923,890
JULY	2,351,329	6,758,431	0	950,009	8,159,751	9,109,760
AUGUST	2,337,773	6,255,941	0	997,321	8,297,826	9,295,147
SEPTEMBER	2,274,685	6,302,923	0	903,537	7,674,071	8,577,608
OCTOBER	1,988,838	6,265,135	0	879,790	7,374,183	8,253,973
NOVEMBER	1,525,341	5,983,627	0	677,428	6,831,540	7,508,968
DECEMBER	1,714,750	5,815,021	0	473,077	7,056,694	7,529,771
JANUARY	283,099	2,862,713	0	60,690	3,085,122	3,145,812
TOTALS	17,846,151	63,837,033	0	7,739,351	73,943,833	81,683,184

Statistical Table of Freight Tonnage and Passages
Passing Through the Canal by Lock and Direction at Sault Ste. Marie, Michigan
for the Season of 2007

Net Tonnage					Passages			
Vessel Flag	MacArthur Lock	Poe Lock	Davis Lock	Total Net Tons	MacArthur Lock	Poe Lock	Davis Lock	Total Passages
American	5,703,252	53,392,621	0	59,095,873	2,083	2,845	0	4,928
Canadian	10,422,377	7,902,642	0	18,325,019	1,410	828	0	2,238
Foreign	1,720,522	2,541,770	0	4,262,292	274	221	0	495
Government	0	0	0	0	604	240	2	846
All Other	0	0	0	0	0	0	0	0
Totals	17,846,151	63,837,033	0	81,683,184	4,372	4,134	2	8,507

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